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Filing Date	October 23, 2003
First Named Inventor	Anssi RAMO et al.
Art Unit	2626
Examiner Name	James S. WOZNIAK
Attorney Docket Number	944-003.191

ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☐ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
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- ☐ Information Disclosure Statement
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Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Ware, Fressola, Van Der Sluys & Adolphson LLP		
Signature	Keith R. Obert		
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Date	January 19, 2007	Reg. No.	58,051

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In Re Application of:

Anssi RAMO

Serial No: **10/692,291** : Examiner: **James S. WOZNIAK**

Filed: **October 23, 2003** : Group Art Unit: **2626**

For: **METHOD AND SYSTEM FOR PITCH CONTOUR QUANTIZATION IN AUDIO CODING**

MAIL STOP APPEAL BRIEF
Commissioner for Patents
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REPLY BRIEF (37 C.F.R. § 41.41)

Sir:

This is a Reply Brief in regard to a final Office Action (mailed November 22, 2005), and in furtherance of an Appeal Brief (mailed September 7, 2006), and in reply to an Examiner's Answer (mailed November 20, 2006).

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Lissette Ramos

Dated: **January 19, 2007**

REMARKS

This Reply Brief is in response to the Examiner's Answer of November 20, 2006. In the Examiner's Answer the Office continues to reject claims 1-5, 7-12, 15, 17 and 20 under 35 U.S.C. § 103(a) as unpatentable over Lee in view of Gao. Claim 6 is rejected under 35 U.S.C. § 103(a) as unpatentable over Lee in view of Gao, and further in view of Swaminathan. Claims 13-14, 16, 18-19 and 21-24 are rejected under 35 U.S.C. § 103(a) as unpatentable over Lee in view of Gao, and in further view of Lumelsky.

Appellant continues to assert the arguments presented in the Appeal Brief, and responds to the Examiner's Answer with the discussion presented below.

With regard to the rejection of claims 1-5, 7-12, 15, 17 and 20 under 35 U.S.C. § 103(a) as unpatentable over Lee et al. (A Very Low Bit Rate Speech Coder Based on a Recognition/Synthesis Program, 2001) in view of Gao (U.S. Patent No. 6,449,590) appellant respectfully submits that independent claim 1 is not disclose or suggested by the cited references, either alone or in combination. Appellant respectfully submits that Lee teaches away from combining its teachings with those of Gao, and therefore there is no motivation to combine the cited references to arrive at the limitations recited in claim 1.

On page 6 of the Examiner's Answer, the Office asserts that limitations relied upon by appellant, i.e. some liner contour segment end points are not points on the original contour, are not recited in the claims. However, claim 1 does specifically recite that a plurality of pitch contour segments are created, wherein the start and end points of at least some of the candidates are different from the start and end point pitch values of the corresponding sub-segments. The Office acknowledges on page 3 of the final Office Action of November 22, 2005 that Lee does not disclose that the start and end points of a pitch contour sub-segment candidate may vary from that of an original speech sub-segment, and relies on Gao for this teaching. The Office asserts that Gao discloses time warping start and end points of a speech sub-segment, and asserts that the combination of Lee and Gao discloses all of the limitations recited in claim 1. However, there is no motivation to combine the cited references arrive at the limitations claimed in claim 1, because Lee teaches away from the use of time-warping.

A prima facie case of obviousness may be rebutted by showing that the prior art teaches away from the claimed invention in any material respect. *In re Peterson*, 65 USPQ2d 1379, 1384 (Fed. Cir. 2003). A reference teaches away when a person of ordinary skill in the art would be discouraged upon reading the reference from following the path that was taken by the applicant. *Tec Air. Inc. v. Denso Mfg. Michigan Inc.*, 52 USPQ2d 1294, 1298 (Fed. Cir. 1999). There is no suggestion to combine if a reference teaches away from its combination with another reference. *Id.* There is no motivation to arrive at the limitations recited in claim 1 by applying time shifting to the teachings of Lee, because Lee teaches away from using time shifting. In the first column on page 483, Lee specifically states:

> This frame-based approach has the advantage that we can accurately choose units with a short unit length. In addition, since frame selection *does not require* a time-warping process, we can synthesize the speech signal without time scale modification. (emphasis added).

Lee specifically teaches away from the use of time-warping, because the method discussed in Lee does not require time-warping, which will lead to additional step not required by the method discussed in Lee. Lee teaches away from combining the teachings Lee discusses with the time-warping process discussed in Gao. Therefore, one of skill in the art would not be motivated to modify Lee by applying time-warping discussed in Gao to arrive at a method in which some pitch contour segment candidates have start and end points different from the start and end point values of the corresponding sub-segments, as recited in claim 1.

Claim 1 is not related at all to time-warping, but instead is directed to creating a plurality of pitch contour segment candidates, and then selecting from the candidates a plurality of consecutive segment candidates to represent the audio segment. The Office cites Gao for the teaching that some start and end points of the segment candidates are different than the corresponding sub-segments, and Gao achieves this through use of time-warping. However, as stated above, the primary reference Lee specifically teaches away from using time-warping, and therefore there is no motivation to modify Lee with the teachings of Gao such that start and end points of the pitch contour segments are different from the start and end point values of the corresponding sub-segments. Instead, the Office has merely combined the cited references using impermissible hindsight reasoning by combining pieces of the selected references to arrive at the claimed limitations.

When making an obviousness determination the invention cannot be evaluated part by part. *Ruiz v. A.B. Chance Co.*, 69 USPQ2d 1686, 1690 (Fed. Cir. 2004). Otherwise an obviousness assessment breaks an invention into its component parts (A+B+C), and finds a prior art reference containing A, another containing B, and another containing C, and on that basis alone declare the invention obvious. *Id.* Using the invention as a roadmap in order to find its components in the prior art is impermissible hindsight reasoning. *Id.*; *see also In re Gorman*, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991) (it is impermissible simply to engage in hindsight reconstruction of the claimed invention using the applicant's structure as a template and selecting elements from references to fill the gaps). When an invention is contended to be obvious based on a combination of elements across different references, there must be a suggestion, motivation or teaching to those skilled in the art for such a combination. *Barbell Co. v. USA Sports Inc.*, 73 USPQ2d 1225, 1227 (Fed. Cir. 2004). Since Lee teaches away from the use of time-warping there is no motivation to combine the cited references, and the Office has merely selected portions of the cited references to arrive at the claimed limitations. Therefore, for at least this reason, claim 1 is not disclosed or suggested by the cited references, either alone or in combination.

Independent claims 11, 17 and 20 contain limitations similar to those recited in claim 1, and for at least the reasons discussed above in relation to claim 1, are not disclosed or suggested by the cited references.

Independent claim 24 claims a communication network comprising a decoder as claimed in claim 17. Therefore, for at least the reasons discussed above in relation to claim 17, claim 24 is not disclosed or suggested by the cited references.

Appellant respectfully submits that the remaining dependent claims are not disclosed or suggested by the cited references at least in view of their dependencies.

Conclusion

For the reasons discussed above as well as those previously presented in appellant's Appeal Brief of September 7, 2006, appellant respectfully submits that the rejections of the final Office Action have been shown to be inapplicable, and respectfully requests that the

Board reverses the rejections to pending claims 1-24. The undersigned believes that no additional fee is required to submit this Reply Brief, but hereby authorizes the Commissioner to charge deposit account 23-0442 for any fee deficiency required to submit this Reply Brief.

Respectfully submitted,

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Date: 19 January 2007

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